

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-29 are currently pending. Claims 30-33 have been cancelled without prejudice or disclaimer; and Claims 1, 11, 17, and 24 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Claims 1, 2, 4, 6, 11, 12, 14, 17, 19, 20, 24, 26, and 27 were rejected under 35 U.S.C. § 102(b) as being anticipated by JP Patent No. 2001270194 to Kobayashi (hereinafter “the ‘194 patent”); Claims 3, 5, 7, 16, 18, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of JP Patent No. 2001217972 to Kajita (hereinafter “the ‘972 patent”); Claims 9, 22, and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of U.S. Patent No. 5,892,595 to Yamakawa et al. (hereinafter “the ‘595 patent”); Claims 8, 15, 21, 28, and 30-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of U.S. Patent Application Publication No. 2002/0036643 to Namizuka et al. (hereinafter “the ‘643 application”); Claims 10 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of the ‘643 application and U.S. Patent Application Publication No. 2001/0019429 to Oteki et al. (hereinafter “the ‘429 application”); and Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the ‘194 patent in view of U.S. Patent Application Publication No. 2001/0015821 to Namizuka et al. (hereinafter “the 821 application”).

Amended Claim 1 is directed to an image forming apparatus, comprising:

an image reading device configured to read an image of an original document;

an image forming device configured to form an image on a sheet in accordance with image data read by the image reading device;

an operation unit connecting device configured to detachably connect an operation unit, said operation unit being configured to accept inputting of operational instructions for operating the image forming apparatus;

a process controller configured to control an operation of the image forming apparatus; and

an expansion unit connecting device configured to connect an additionally attachable expansion unit, said additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job and being configured to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device,

wherein the expansion control device is configured to allocate resources of the image forming apparatus, including the image reading device or the image device, between the process controller and the at least one function adding unit, and

    said process controller is configured to control the operation unit to operate and to receive a control command from the expansion control device to perform image formation.

Regarding the rejection of Claim 1 under 35 U.S.C § 102(b), it is respectfully submitted that the rejection of Claim 1, as being anticipated by the ‘194 patent, is rendered moot by the present amendment to Claim 1. However, since Claim 1 has been amended to incorporate limitations analogous to the limitations recited in Claim 30, Applicant will address the ‘194 patent and the ‘643 application cited in the rejection of Claim 30.

With respect to the rejection of Claim 30 under 35 U.S.C. § 103(a), the Office Action asserts that the ‘194 UART corresponds to the claimed “additionally attachable expansion unit,” and that the ‘194 external device corresponds to the claimed “at least one function

adding unit.”<sup>1</sup> Further, it is noted that the Office Action, at page 5, asserts that the ‘194 external device, not the UART, teaches the claimed “additionally attachable expansion unit.”

However, assuming *arguendo* that the ‘194 UART corresponds to the claimed “additionally attachable expansion unit,” it is respectfully submitted that the ‘194 patent fails to disclose an additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job and being configured to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device, as defined in Claim 1. Rather, the ‘194 patent simply discusses that a copier main body and each of a plurality of external apparatuses **carry out asynchronous communication using respective UARTs.**<sup>2</sup> The ‘194 patent does not disclose that the UART includes ***an expansion control device configured to allocate the image reading device or the image forming device to a job.***

Further, assuming *arguendo* that the ‘194 external device corresponds to the claimed “additionally attachable expansion unit,” it is respectfully submitted that the ‘194 patent does not disclose an additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job and being configured to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device, as defined in Claim 1. Rather, the ‘194 patent simply discusses external devices that are connected via respective UARTs.<sup>3</sup> The ‘194 patent does not disclose that the external devices are configured ***to further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control***

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<sup>1</sup> See Office Action dated April 2, 2008, page 44.

<sup>2</sup> See ‘194 patent, paragraph [0005].

<sup>3</sup> Id. at paragraph [0018].

*device.* Thus, it is respectfully submitted that the ‘194 patent fails to disclose the “additionally attachable expansion unit” defined in Claim 1.

Moreover, the Office Action acknowledges, and it is respectfully submitted, that the ‘194 patent fails to disclose an expansion control device that is configured to allocate resources of the image forming apparatus, including the image reading device or the image device, between the process controller and the at least one function adding unit, as defined in Claim 1. Rather, the Office Action relies on the ‘643 application for such a teaching.

The ‘643 application is directed to an image-processing apparatus. In particular, the ‘643 application discusses a conventional system including an external extension application unit that can connect a plurality of applications to a motherboard 103. Further, the ‘643 application discusses that, in the conventional system, each application (*e.g.*, a facsimile control unit and a printer control unit) has a CPU and a memory, and functions as an independent unit.<sup>4</sup>

The Office Action appears to assert, with respect to Figs. 1 and 2 of the ‘643 application, that the motherboard 103 corresponds to an “expansion unit,” that the system controller 101 in PCU 102 corresponds to a “process controller,” and that the system controller 109 corresponds to an “expansion control device.”<sup>5</sup>

However, it is respectfully submitted that the ‘643 application fails to disclose an additionally attachable expansion unit including an expansion control device configured to allocate the image reading device or the image forming device to a job, as defined in Claim 1. Rather, it is noted that Fig. 1 of the ‘643 application illustrates that the motherboard 103 is **separate** from the system controller 109. Further, the ‘643 application simply discusses that an external extension application unit can connect a plurality of applications to a motherboard 103. The ‘643 application does not disclose that the motherboard 103 includes the system

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<sup>4</sup> See ‘643 application, paragraph [0007].

<sup>5</sup> See Office Action dated April 2, 2008, page 45.

controller 109, or that the motherboard 103 includes *an expansion control device* configured to *allocate the image reading device or the image forming device to a job*.

Further, the '643 application fails to disclose an expansion control device that is configured to allocate resources of the image forming apparatus, including the image reading device or the image device, between the process controller and the at least one function adding unit, as defined in Claim 1. Rather, as noted above, the '643 application simply discusses that an external extension application unit can connect a plurality of applications to a motherboard 103. Each of the '643 applications having a CPU and a memory, and functioning as an independent unit.<sup>6</sup> The '643 application does not disclose that the motherboard 103 includes *an expansion control device* configured to *allocate resources of the image forming apparatus*, including the image reading device or the image device, *between the process controller and the at least one function adding unit*.

Additionally, the Office Action cites the '643 patent for teaching a system controller 14 that controls an entire MFP and that gives instructions to other controllers in the system (e.g., the process controller) to perform other functions (e.g., facsimile communication). However, it is noted that the '643 application does not disclose that the system controller 14 is included in *an additionally attachable expansion unit* that is configured to *further connect to at least one function adding unit, which adds at least one function to the image forming apparatus under control of the expansion control device*, as defined in Claim 1.

Thus, no matter how the teachings of the '194 patent and the '643 application are combined, the combination does not teach or suggest the "additionally attachable expansion unit," as defined in Claim 1. Accordingly, Applicant respectfully traverses the rejection of Claim 30 as being unpatentable over the '194 patent and the '643 application.

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<sup>6</sup> See '643 application, paragraph [0007].

Amended Claim 11 recites limitations analogous to the limitations recited in Claim 1.

Further, Claim 11 has been amended in a manner analogous to the amendments to Claim 1.

Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 1, it is respectfully submitted that independent Claim 11 (and all associated dependent claims) patentably defines over any proper combination of the ‘194 patent and the ‘643 application.

Amended Claims 17 and 24 recite, in part,

allocating, by the expansion control device, resources of the image forming apparatus, including the image reading device or the image forming device, between the process controller and at least one function adding unit when the presence of the connection of the additionally attachable expansion unit is detected, the at least one function adding unit being configured to connect to the additionally attachable expansion unit and to add at least one function to the image forming apparatus under control of the expansion control device.

As noted above, the ‘194 patent and the ‘643 application, alone or in proper combination, fail to disclose the “additionally attachable expansion unit” recited in Claim 1. Thus, the ‘194 patent and the ‘643 application fail to disclose the methods of independent Claims 17 and 24, respectively. Accordingly, it is respectfully submitted that independent Claims 17 and 24 (and all associated dependent claims) patentably define over any proper combination of the ‘194 patent and the ‘643 application.

Regarding the rejections of dependent Claims 3, 5, 7, 16, 18, and 25, it is respectfully submitted that the ‘972 patent fails to remedy the deficiencies of the ‘194 patent and the ‘643 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 3, 5, 7, 16, 18, and 25 patentably define over any proper combination of the ‘194 patent, the ‘643 application, and the ‘972 patent.

Regarding the rejections of dependent Claims 9, 22, and 29 under 35 U.S.C. § 103(a), it is respectfully submitted that the ‘595 patent fails to remedy the deficiencies of the ‘194

patent and the ‘643 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 9, 22, and 29 patentably define over any proper combination of the ‘194 patent, the ‘643 application, and the ‘595 patent.

Regarding the rejections of dependent Claims 10 and 23 under 35 U.S.C. § 103(a), it is respectfully submitted that the ‘429 application fails to remedy the deficiencies of the ‘194 patent and the ‘643 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 10 and 23 patentably define over any proper combination of the ‘194 patent, the ‘643 application, and the ‘429 application.

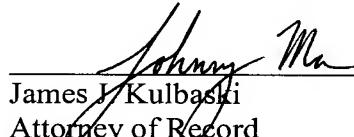
Regarding the rejection of dependent Claim 13 under 35 U.S.C. § 103(a), it is respectfully submitted that the ‘821 application fails to remedy the deficiencies of the ‘194 patent and the ‘643 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claim 13 patentably defines over any proper combination of the ‘194 patent, the ‘643 application, and the ‘821 application.

Thus, it is respectfully submitted that independent Claims 1, 11, 17, and 24 (and all associated dependent claims) patentably define over any proper combination of the ‘194 patent, the ‘972 patent, the ‘595 patent, the ‘643 application, the ‘429 application, and the ‘821 application.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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